**Group No.: \_\_\_\_Y\_\_\_\_ Project No.: \_\_\_\_B\_\_\_\_**

**Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PHASE - IV**

**DATABASE MANAGEMENT & APPLICATIONS**

1. **CHANGES MADE**:

<none>

1. **SQL QUERIES TO CREATE DATABASE AND TABLES**:
   1. To create Database:

CREATE DATABASE IF NOT EXISTS online shopping;

USE online shopping;

* 1. To create Tables:

CREATE TABLE Customer

(

Customer\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Username VARCHAR(15) ,

UNIQUE KEY unique\_Username(Username),

Password VARCHAR(15),

EmailID VARCHAR(60),

UNIQUE KEY unique\_EmailID(EmailID),

First\_Name CHAR(20),

Middle\_Name CHAR(20),

Last\_Name CHAR(20),

Customer\_PhoneNo INT UNSIGNED NOT NULL,

Age INT UNSIGNED NOT NULL CHECK(Age>13)

);

CREATE TABLE Products

(

Product\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Product\_Name VARCHAR(40),

Price INT UNSIGNED NOT NULL,

Brand VARCHAR(30),

Discount VARCHAR,

Description TEXT,

Stock INT,

Sold\_Units INT UNSIGNED,

Rating DECIMAL(5),

Review TEXT

);

CREATE TABLE Cart

(

Cart\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Total\_Cost INT UNSIGNED NOT NULL

);

CREATE TABLE Cart\_Item

(

Item\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Item\_Total\_Cost INT UNSIGNED NOT NULL,

Quantity INT UNSIGNED NOT NULL,

FOREIGN KEY Item\_Product\_ID(Product\_ID),

FOREIGN KEY Item\_Cart\_ID(Cart\_ID)

);

CREATE TABLE Orders

(

Order\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Order\_Date DATETIME,

FOREIGN KEY OCart\_ID(Cart\_ID),

FOREIGN KEY OCustomer\_ID(Customer\_ID)

);

CREATE TABLE Payemnts

(

Payment\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Payement\_Type TEXT,

Account\_No INT UNSIGNED NOT NULL,

FOREIGN KEY PCart\_ID(Cart\_ID),

FOREIGN KEY PCustomer\_ID(Customer\_ID)

);

CREATE TABLE Courier\_Local\_Address

(

Courier\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Courier\_Name VARCHAR(50),

Courier\_Phone\_No INT UNSIGNED NOT NULL,

Courier\_House\_No TEXT,

Courier\_Colony\_Name TEXT,

Courier\_Street\_Name TEXT,

Courier\_Landmark TEXT,

Courier\_Address\_Type TEXT,

CL\_Courier\_Pincode INT(6) UNSIGNED NOT NULL,

FOREIGN KEY COrder\_ID(Order\_ID)

);

CREATE TABLE Courier\_City\_State\_District

(

CC\_Courier\_Pincode INT(6) UNSIGNED NOT NULL PRIMARY KEY,

Courier\_City TEXT,

Courier\_State TEXT,

Courier\_District TEXT

);

CREATE TABLE Supplier\_Local\_Address

(

Supplier\_ID INT UNSIGNED NOT NULL PRIMARY KEY,

Supplier\_Name VARCHAR(30),

Supplier\_PhoneNo INT UNSIGNED NOT NULL,

Supplier\_Street\_Address TEXT,

Supplier\_Landmark TEXT,

SL\_Supplier\_Pincode INT(6) UNSIGNED NOT NULL

);

CREATE TABLE Supplier\_City\_State\_District

(

SC\_Supplier\_Pincode INT(6) UNSIGNED NOT NULL PRIMARY KEY,

Supplier\_City TEXT,

Supplier\_State TEXT,

Supplier\_District TEXT

);

CREATE TABLE Supplier\_supplies\_Products

(

SP\_Supplier\_ID INT UNSIGNED NOT NULL,

SP\_Product\_ID INT UNSIGNED NOT NULL,

PRIMARY KEY(SP\_Supplier\_ID , SP\_Product\_ID)

);

CREATE TABLE Customer\_buys\_Product

(

CP\_Customer\_ID INT UNSIGNED NOT NULL,

CP\_Product\_ID INT UNSIGNED NOT NULL,

PRIMARY KEY(CP\_Customer\_ID , CP\_Product\_ID)

);

CREATE TABLE Category

(

Cat\_Product\_ID INT UNSIGNED NOT NULL,

Category\_Name VARCHAR(30),

PRIMARY KEY(Cat\_Product\_ID , Cat\_Name)

);

CREATE TABLE Product\_Subcategory

(

SubCat\_Product\_ID INT UNSIGNED NOT NULL,

SubCategory\_Name VARCHAR(30),

PRIMARY KEY(SubCat\_Product\_ID , SubCategory\_Name)

);

CREATE TABLE Customer\_Accounts

(

Ac\_Customer\_ID INT UNSIGNED NOT NULL,

Ac\_Account\_No INT UNSIGNED NOT NULL,

PRIMARY KEY(Ac\_Customer\_ID , Ac\_Account\_No)

);

CREATE TABLE Account\_IFSC

(

AI\_Account\_No INT UNSIGNED NOTNULL PRIMARY KEY,

AI\_IFSC INT UNSIGNED NOT NULL

);

CREATE TABLE IFSC\_Bank

(

IB\_IFSC INT UNSIGNED NOT NULL PRIMARY KEY,

BankName VARCHAR(60),

Branch VARCHAR(30)

);

CREATE TABLE Address\_Local

(

Adrs\_Customer\_ID VARCHAR(200) PRIMARY KEY,

Address\_ID INT UNSIGNED NOT NULL,

House\_No INT UNSIGNED NOT NULL,

Colony\_Name VARCHAR(30),

Street\_Address VARCHAR(30),

Landmark VARCHAR(30),

AL\_Pincode INT(6) UNSIGNED NOT NULL,

);

CREATE TABLE Address\_City\_State\_District

(

AC\_Pincode INT(6) UNSIGNED NOT NULL PRIMARY KEY,

City VARCHAR(30),

State VARCHAR(30),

District VARCHAR(30),

);

1. **SQL QUERIES FOR ALL THE APPLICATION REQUIREMENTS**:
   1. Addition of new Customers

INSERT INTO Customer VALUES( ‘C\_ID’ , ’C\_Username’ , ’C\_Password’ , ’C\_EmaiID’ , ’C\_First\_Name’ , ’C\_Middle\_Name’ , ’C\_Last\_Name’ , ’C\_PhoneNo’ , ’C\_Age’ );

* 1. Addition of new Products

INSERT INTO Products VALUES( ‘P\_ID’ , ‘P\_Name’ , ‘P\_Price’ , ‘P\_Brand’ , ‘P\_Discount’ , ‘P\_Description’ , ‘P\_Stock’ , ‘P\_Sold\_Units’ , ‘P\_Rating’ , ‘P\_Review’ );

* 1. Addition of Products into a Category

INSERT INTO Category VALUES( ‘Cat\_P\_ID’ , ‘Cat\_Name’ );

* 1. Addition of Products into a Sub Category

INSERT INTO Product\_Subcategory VALUES( ‘SubCat\_P\_ID’ , ‘SubCat\_Name’ );

* 1. Storing Customer Local Address

INSERT INTO Address\_Local VALUES( ‘AL\_C\_ID’ , ‘AL\_ID’ , ‘AL\_House\_No’ , ‘AL\_Colony’ , ‘AL\_Street’ , ‘AL\_Landmark’ , ‘AL\_Pincode’ );

* 1. Storing Customer State Address

INSERT INTO Address\_City\_State\_District VALUES( ‘AC\_Pincode’ , ‘AC\_City’ , ‘AC\_State’ , ‘AC\_District’ );

* 1. Storing Customer Accounts

INSERT INTO Customer\_Accounts VALUES( ‘Ac\_C\_ID’ , ‘Ac\_Account\_No’ );

* 1. Storing Account IFSC

INSERT INTO Account\_IFSC VALUES( ‘AI\_Account\_No’ , ‘AI\_IFSC’ );

* 1. Storing Custommer Bank Details

INSERT INTO IFSC\_Bank VALUES( ‘IB\_IFSC’ , ‘IB\_Name’ , ‘IB\_Branch’ );

* 1. Addition of new Cart

INSERT INTO Cart VALUES( ‘Cart\_ID’ , ‘Cart\_Total\_Cost’ );

* 1. Addition of items into Cart

INSERT INTO Cart\_Item VALUES( ‘CItem\_ID’ , ‘CItem\_Total\_Cost’ , ‘Citem\_Quantity’ , ‘CItem\_P\_ID’ , ‘CItem\_Cart\_ID’ );

* 1. Addition of new Orders

INSERT INTO Orders VALUES( ‘O\_ID’ , ‘O\_Date’ , ‘O\_Cart\_ID’ , ‘O\_C\_ID’ );

* 1. Addition of Payments of Orders

INSERT INTO Payments VALUES( ‘Pay\_ID’ , ‘Pay\_Type’ , ‘Pay\_Account\_No’ , ‘Pay\_Cart\_ID’ , ‘Pay\_C\_ID’ );

* 1. Storing Supplier Local Address

INSERT INTO Supplier\_Local\_Address VALUES( ‘SL\_ID’ , ‘SL\_Name’ , ‘SL\_PhoneNo’ , ‘SL\_Street’ , ‘SL\_Landmark’ ,’SL\_Pincode’ );

* 1. Storing Supplier State Address

INSERT INTO Supplier\_City\_State\_District VALUES( ‘SC\_Pincode’ , ‘SC\_City’ , ‘SC\_State’ , ‘SC\_District’ );

* 1. Storing Courier Local Address

INSERT INTO Courier\_Local\_Address VALUES( ‘CL\_ID’ , ‘CL\_Name’ , ‘CL\_Phone\_No’ , ‘CL\_House\_No’ , ‘CL\_Colony’ , ‘CL\_Street’ , ‘CL\_Landmark’ , ‘CL\_Address\_Type’ , ‘CL\_Pincode’ , ‘CL\_O\_ID’ );

* 1. Storing Courier State Address

INSERT INTO Courier\_City\_State\_District VALUES( ‘CC\_Pincode’ , ‘CC\_City’ , ‘CC\_State’ , ‘CC\_District’ );

* 1. Customer buying Products

INSERT INTO Customer\_buys\_Product VALUES( ‘CP\_C\_ID’ , ‘CP\_P\_ID’ );

* 1. Supplier supplying Products

INSERT INTO Supplier\_supplies\_Products VALUES( ‘SP\_SL\_ID’ , ‘SP\_P\_ID’ );

* 1. Displaying detailed list of all Customers

SELECT \* FROM Customer;

* 1. Displaying detailed list of all Products

SELECT \* FROM Products;

* 1. Displaying list of all Carts

SELECT \* FROM Cart;

* 1. Displaying list of all items in cart

SELECT \* FROM Cart\_Item;

* 1. Displaying details of all Orders

SELECT \* FROM Orders;

* 1. Display the available stock of a particular Product

SELECT Stock

FROM Products

WHERE Product\_Name = P\_Name;

* 1. Display the sold amount of a particular Product

SELECT Sold\_Units

FROM Products

WHERE Product\_Name = P\_Name;

* 1. Displaying all the products belonging to a particular category

SELECT Cat\_Product\_ID

FROM Customer

WHERE Category\_Name = Cat\_Name;

* 1. Displaying all the products belonging to a particular Sub Category

SELECT SubCat\_Product\_ID

FROM Customer

WHERE SubCategory\_Name = SubCat\_Name;

* 1. Displaying details of a particuar Product

SELECT \*

FROM Products

WHERE Product\_Name = P\_Name;

* 1. Displaying previous Order details of a Customer (Order History)

SELECT \*

FROM Orders

WHERE Customer\_Name = C\_Name;

* 1. Removing Items from Cart

DELETE FROM Cart\_Item

WHERE Item\_ID = CItem\_ID;

1. **CHALLENGES FACED**:
   1. Writing quieres for some requirements were difficult
   2. A lot of tables are to be created